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Attorney Docket P04860US0

Amendments to the Claims

Claim 1 (Currently Amended): A method of manufacturing thin film resistors comprising: forming a plurality of discrete component thin film chip resistors, each of the plurality formed by:

- (a) depositing a non-tantalum metal film resistive layer on a thin film resistor substrate;
- (b) attaching a thin film resistor termination on each end of the metal film resistive layer; and
- (c) depositing an outer layer moisture barrier consisting of tantalum pentoxide film directly overlaying and attaching to contacting the metal film resistive layer to form one of the plurality of thin film chip resistors wherein the moisture barrier is formed from deposition of the tantalum pentoxide and not through oxidation of tantalum and wherein the outer moisture barrier reduces failures due to electrolytic corrosion under powered moisture conditions;

exposing selected thin film chip resistors to powered moisture conditions; observing failures due to electrolytic corrosion under powered moisture conditions in the selected thin film chip resistors.

Claim 2 (Original): The method of claim 1 wherein the step of depositing a layer of tantalum pentoxide is sputtering tantalum pentoxide film.

Claim 3 (Original): The method of claim 1 wherein the metal film layer is an alloy containing nickel.

Claim 4 (Original): The method of claim 1 wherein the metal film layer is an alloy containing chromium.

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Claim 5 (Original): The method of claim 1 wherein the metal film layer is a nickel-chromium alloy.

Claims 6-14 (Canceled).

Claim 15 (Currently Amended): A method of manufacturing [[a]] thin film chip resistors comprising:

forming a plurality of discrete component thin film chip resistors, each of the plurality formed by:

- (a) depositing a non-tantalum metal film resistive layer on a substrate;
- (b) attaching a termination on each end of the metal film resistive layer;
- (c) depositing a passivation layer directly overlaying and attaching to contacting the metal film layer; and
- (d) depositing an outer layer moisture barrier consisting of tantalum pentoxide film directly overlaying and attaching to contacting the passivation layer to form one of the plurality of thin film chip resistors, wherein the moisture barrier is formed from deposition of the tantalum pentoxide and not through oxidation of tantalum;

exposing selected thin film chip resistors from the plurality of thin film chip resistors to powered moisture conditions;

observing failure due to electrolytic corrosion under powered moisture conditions in the selected thin film chip resistors.

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Claim 16 (New): A method of manufacturing a discrete component thin film chip resistor, comprising:  
depositing a non-tantalum metal film resistive element on a thin film resistor substrate;  
attaching a thin film resistor termination on each end of the non-tantalum metal film resistive element;  
depositing an outer moisture barrier consisting of tantalum pentoxide directly overlaying and contacting the non-tantalum metal film resistive element;  
wherein the moisture barrier is formed from deposition of the tantalum pentoxide and not through oxidation of tantalum;  
wherein the outer moisture barrier reduces failures due to electrolytic corrosion under powered moisture conditions.